

AP  
24W



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Appl. No. : 09/709,705  
Appellant : Francisco J. Romero, et al.  
Filed : November 9, 2000  
TC/A.U. : 2141  
Examiner : Luu, Le Hien

Confirmation No. 4633

Docket No. : 10002676-1

Board of Patent Appeals and Interferences  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**APPEAL BRIEF**

Dear Sir:

This Appeal Brief is submitted in response to the Examiner's Final Office  
Action dated April 19, 2005.

Appellants filed a Notice of Appeal on July 19, 2005.

### **Real Party in Interest**

The real party in interest is Hewlett-Packard Development Company, LP, a limited partnership established under the laws of the State of Texas and having a principal place of business at 20555 S.H. 249 Houston, Texas 77070, U.S.A. (hereinafter "HPDC"). HPDC is a Texas limited partnership and is a wholly-owned affiliate of Hewlett-Packard Company, a Delaware Corporation, headquartered in Palo Alto, California. The general or managing partner of HPDC is HPQ Holdings, LLC.

### **Related Appeals and Interferences**

There are no related appeals and/or interferences.

### **Status of Claims**

Claims 1-31 remain in the application, all of which stand rejected.

### **Status of Amendments**

No amendments have been filed since the Final Office Action. All amendments have been entered.

### **Summary of Claimed Subject Matter**

In one embodiment (claim 1), a method to automatically activate (p. 6, line 26) a reserve hardware component (FIG. 1, 80; p. 6, line 25) comprises 1) monitoring (FIG. 4, 400) a load on a number of active resources (p. 3, line 7); 2) comparing (p. 6, line 20) the load to a threshold specified in a resource usage policy (FIG. 4, 410; p. 3, line 7); and 3) automatically activating (p. 6, line 26) the reserve hardware (FIG. 1, 80; p. 6, line 25) component when dictated by the resource usage policy (FIG. 3, 310; p. 6, line 21).

In another embodiment (claim 11), apparatus for automatically activating (p. 3, line 22) a reserve hardware component (FIG. 1, 80; p. 6, line 25) comprises 1) at least one computer readable storage media (p. 3, line 3); 2) a resource usage policy (FIG. 3, 310; p. 3, lines 7-11) stored on the at least one computer readable storage media (p. 3, line 3); and 3) computer readable program code (p. 3, lines 2-3) stored on the at least one computer readable storage media (p. 3, line 3). The computer readable program code (p. 3, lines 2-3) comprises a) program code for monitoring a load on a number of active resources (p. 6, lines 17-20); b) program code for comparing the monitored load to a threshold specified in the resource usage policy (p. 6, lines 20-22); and c) program code for activating the reserve hardware component when dictated by the resource usage policy (p. 6, lines 25-27).

In yet another embodiment (claim 19), apparatus for automatically activating (p. 3, line 22) a reserve hardware component (FIG. 1, 80; p. 6, line 25) comprises 1) means for monitoring a load on a number of active resources (p. 6, lines 17-20); 2) means for comparing the monitored load to a threshold specified in a resource usage policy (p. 6, lines 20-22); and 3) means for activating the reserve hardware component when dictated by the resource usage policy (p. 6, lines 25-27).

### **Grounds of Rejection to be Reviewed on Appeal**

I. Whether claims 1-31 should be rejected under 35 USC 103(a) as being unpatentable over Lumelsky et al. (U.S. Pat. No. 6,516,350; hereinafter "Lumelsky") in view of Forecast et al. (U.S. Pat. No. 6,230,200; hereinafter "Forecast").

## Argument

### **I. Whether claims 1-31 should be rejected under 35 USC 103(a) as being unpatentable over Lumelsky in view of Forecast.**

With respect to appellants' claim 1, the Examiner asserts that:

As to claim 1, Lumelsky teaches. . .

. . .

automatically activating said reserve resource when dictated by said resource usage policy (col. 8, line 48 – col. 9, line 38).

However, Lumelsky does not explicitly teach said reserve resource is [a] hardware component.

Forest [sic, Forecast] teaches one or more of stream servers are kept in a standby mode, and they are being used as hot spares for any one of the other stream servers that fails to acknowledge commands from controller servers (col. 9 lines 6-36).

It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of Lumelsky and Forecast to activate said standby stream servers that include hardware components such as processor and memory when said other stream servers fails to timely acknowledge commands because it would improve system performance.

4/19/2005 Final Office Action, pp. 2-3, sec. 4.

Appellants agree that Lumelsky fails to teach the automatic activation of a “reserve hardware component”. However, appellants do not agree that this is taught by Forecast.

Lumelsky teaches the replication of requested content from one server to another when “there are no more sufficient available resources on all the servers managed by the system”. See, Lumelsky, col. 8, lines 48-49. And, as the Examiner correctly alludes, Forecast teaches the activation of a spare stream server when “any one of the other stream servers. . . fails to acknowledge commands from the active one of the controller servers 28, 29 or is otherwise found to experience a failure.” See, Forecast, col. 9, lines 33-36. The triggers that cause Lumelsky and Forecast to take action are therefore different. That is,



while Lumelsky begins to replicate content to a new server when there "are no more sufficient available resources on all the servers managed by the system", Forecast activates a spare stream server when it is determined that an already active server has failed. Forecast does not provide any indication that an additional stream server should be activated in the absence of failure, but in response to an increased load.

Given that Lumelsky and Forecast replicate content to (or activate) servers in response to different triggers, appellants believe there would not have been any motivation for one of ordinary skill in the art to combine Lumelsky's and Forecast's teachings at the time of appellants' invention.

In the absence of either Lumelsky or Forecast containing a motivation to combine their teachings, appellants believe the Examiner is engaging in a hindsight reconstruction of their invention. That is, appellants believe the Examiner located the Forecast reference by searching for various keywords found in appellants' claim (e.g., "monitoring", "activating", "threshold"), and not by searching for solutions to a common problem (e.g., what to do when a load exceeds a threshold). While the former may be useful in locating references that *might* have a relation, the Examiner cannot stop upon finding all of the bits and pieces of appellants' claims in other patent references. Instead, the Examiner must go a step further and review the references from the vantage point of "one of ordinary skill in the art at the time appellants' invention was made". A determination can then be made as to whether such a person would have found it obvious to combine the teachings of the references. Without performing this last step, the Examiner has simply engaged in impermissible hindsight reconstruction.

Appellants believe their claim 1 should be allowed for at least the above reasons. However, even assuming, *arguendo*, that the teachings of Lumelsky and Forecast can be properly combined, appellants do not believe the combined teachings of these references yields the invention of their claim 1.

The Examiner asserts that Forecast can be construed as teaching the automatic activation of a reserve hardware component because the activation of

a hot spare stream server would necessarily include the activation of a plurality of "hardware components such as processor and memory". See, 4/19/2005 Final Office Action, p. 3, sec. 4. However, in attempting to draw this correlation, the Examiner is misconstruing and glossing over the decision that is being made in appellants' claim 1. That is, appellants' claim 1 activates a reserve "hardware component". Although the activation of enough hardware components might eventually result in the activation of a "server", the decision being made in appellants' claim 1 is more granular than the activation of a "server". As a result, appellants believe that, even if it were proper to combine the teachings of Lumelsky and Forecast (which it is not), their combined teachings would not result in a method that performs the action of "automatically activating a reserve *hardware component* when dictated by [a] resource usage policy." See, appellants' claim 1.

With respect to appellants' above argument, It is important to note that Forecast itself provides a distinction between "servers" and "components". See, e.g., col. 1, lines 53-55, wherein Forecast states:

. . .The actual level of resources available at any given time may depend on a specific configuration of *components* within the file server. . .

(Emphasis added).

Appellants' claim 1 is believed to be allowable at least for the above reasons. Appellants' claims 2-10 and 22-26 are believed to be allowable at least for the reason that they depend from appellants' claim 1. Appellants' claims 11-21 and 27-31 are believed to be allowable at least for reasons similar to why appellants' claim 1 is believed to be allowable. However, many of appellants' claims are believed to be allowable for other reasons.

With respect to appellants' claims 23, 25, 28 and 30, appellants disagree with the Examiner's assertion that 1) Forecast's activation of an entire "standby" server that includes a hardware component is equivalent to 2) appellants' activation of a "component of an active server resource." Given that Forecast does not teach the activation of a "hardware component", the Examiner's position

would require construing Forecast's "standby" server as an "active server resource". However, this would result in Forecast "activating" an "active server resource", which is nonsensical. The Examiner's attempt to read appellants' claims 23, 25, 28 and 30 on Lumelsky's and Forecast's combined teachings must therefore fail; and appellants' claims 23, 25, 28 and 30 should be allowed over the combined teachings of Lumelsky and Forecast for this additional reason.

With respect to appellants' claims 26 and 31, appellants can find no teaching by Lumelsky that the "threshold" specified in a resource usage policy is a "rate of active resource consumption". Although the Examiner asserts that this is taught by Lumelsky in col. 12, lines 26-52, appellants have reviewed this excerpt in detail and have found absolutely no mention of such a threshold. Appellants' claims 26 and 31 are therefore believed to be additionally allowable over the combined teachings of Lumelsky and Forecast.

With respect to appellants' claim 13, appellants note that the Examiner has not provided a detailed rejection of this claim. Instead, the Examiner has merely rejected claim 13 as having "similar limitations" as claim 1. See, 4/19/2005 Final Office Action, p. 5, sec. 15. Although some of claim 13's limitations are similar to those of claim 1, claim 13 recites limitations that are not set forth in claim 1. For example, claim 13 recites that resource activation is "based on a hierarchical resource deployment scheme". Lumelsky and Forecast teach no such hierarchy of resources to be deployed. Rather, Lumelsky merely replicates content to a set of resources that are capable of supporting the replicated content; and Forecast merely activates a spare server when another like server experiences a failure. Claim 13 is therefore believed to be allowable for this additional reason.

## **II. Conclusion**

In summary, the art of record does not teach nor suggest the subject matter of appellants' claims 1-31. These claims are therefore believed to be allowable.

Respectfully submitted,  
DAHL & OSTERLOTH, L.L.P.

By:

A handwritten signature in black ink, appearing to read 'G. Osterloth', written over a horizontal line.

Gregory W. Osterloth  
Reg. No. 36, 232  
Tel: (303) 291-3200

## **Claims Appendix**

### **Listing of Claims:**

Claim 1 (previously presented): A method to automatically activate a reserve hardware component, comprising:

monitoring a load on a number of active resources;

comparing said load to a threshold specified in a resource usage policy;

and

automatically activating said reserve hardware component when dictated by said resource usage policy.

Claim 2 (previously presented): The method of claim 1, further comprising updating said resource usage policy after said reserve hardware component is activated.

Claim 3 (previously presented): The method of claim 1, further comprising balancing said load among said number of active resources and said activated reserve hardware component.

Claim 4 (previously presented): The method of claim 1, further comprising:

a) monitoring a combined load on said number of active resources and said activated reserve hardware component;

b) comparing said combined load to a second threshold specified in a second resource usage policy;

c) deactivating a hardware component selected from said number of active resources and said activated reserve hardware component when dictated by said second resource usage policy; and

d) indicating that said selected hardware component is deactivated.

Claim 5 (original): The method of claim 1, further comprising signaling an event manager based on said monitored load as dictated by said resource usage policy.

Claim 6 (previously presented): The method of claim 1, wherein said resource usage policy dictates activating said reserve hardware component when said monitored load exceeds said threshold for a predetermined occurrence.

Claim 7 (previously presented): The method of claim 1, wherein said resource usage policy dictates activating said reserve hardware component when said monitored load exceeds said threshold for a period of time.

Claim 8 (previously presented): The method of claim 1, wherein said resource usage policy triggers a number of alarms when said threshold is met, and wherein said resource usage policy dictates activating said reserve hardware component when a response to said number of alarms is not received.

Claim 9 (previously presented): The method of claim 1, further comprising updating a configuration profile to include said activated reserve hardware component, said update being made in response to said indication that said reserve hardware component is activated.

Claim 10 (previously presented): The method of claim 1 further comprising charging a user of said activated reserve hardware component a fee, said charge being made in response to said indication that said reserve hardware component is activated.

Claim 11 (previously presented): An apparatus for automatically activating a reserve hardware component, comprising:

at least one computer readable storage media;

a resource usage policy stored on said at least one computer readable storage media; and

computer readable program code stored on said at least one computer readable storage media, said computer readable program code comprising:

- a) program code for monitoring a load on a number of active resources;
- b) program code for comparing said monitored load to a threshold specified in said resource usage policy;
- c) program code for activating said reserve hardware component when dictated by said resource usage policy.

Claim 12 (previously presented): The apparatus of claim 11, further comprising program code for indicating that said reserve hardware component has been activated.

Claim 13 (previously presented): The apparatus of claim 11, further comprising program code for selecting a reserve hardware component to activate based on a hierarchical resource deployment scheme.

Claim 14 (original): The apparatus of claim 11, further comprising program code for signaling an event manager based on said monitored load when dictated by said resource usage policy.

Claim 15 (previously presented): The apparatus of claim 11, further comprising program code for selecting said reserve hardware component from a pool of reserve resources.

Claim 16 (previously presented): The apparatus of claim 11, further comprising:

- a) program code for monitoring a combined load on said number of active resources and said activated reserve hardware component;

- b) program code for comparing said combined load to a second threshold specified in a second resource usage policy;
- c) program code for deactivating a hardware component selected from said number of active resources and said activated reserve hardware component when dictated by said second resource usage policy; and
- d) program code for indicating that said selected hardware component is deactivated.

Claim 17 (previously presented): The apparatus of claim 16, further comprising program code for returning said deactivated reserve hardware component to a pool of reserve resources.

Claim 18 (original): The apparatus of claim 11, further comprising:  
a configuration profile stored on said at least one computer readable storage medium; and  
program code for updating said configuration profile to track the availability of each said resource.

Claim 19 (previously presented): An apparatus for automatically activating a reserve hardware component, comprising:  
means for monitoring a load on a number of active resources;  
means for comparing said monitored load to a threshold specified in a resource usage policy;  
means for activating said reserve hardware component when dictated by said resource usage policy.

Claim 20 (previously presented): The apparatus of claim 19, further comprising means for tracking the availability of said number of active resources and said reserve hardware component.



Claim 21 (previously presented): The apparatus of claim 19, further comprising means for deactivating said reserve hardware component based on said monitored load when dictated by said resource usage policy.

Claim 22 (previously presented): The method of claim 1, wherein activating said reserve hardware component comprises activating a reserve processor.

Claim 23 (previously presented): The method of claim 22, wherein said reserve processor is a component of an active server resource.

Claim 24 (previously presented): The method of claim 1, wherein activating said reserve hardware component comprises activating a reserve memory.

Claim 25 (previously presented): The method of claim 24, wherein said reserve memory is a component of an active server resource.

Claim 26 (previously presented): The method of claim 1, wherein the threshold specified in said resource usage policy is a rate of active resource consumption.

Claim 27 (previously presented): The apparatus of claim 11, wherein said program code for activating said reserve hardware component activates a reserve processor.

Claim 28 (previously presented): The apparatus of claim 27, wherein said reserve processor is a component of an active server resource.

Claim 29 (previously presented): The apparatus of claim 11, wherein said program code for activating said reserve hardware component activates a reserve memory.

Claim 30 (previously presented): The apparatus of claim 29, wherein said reserve memory is a component of an active server resource.

Claim 31 (previously presented): The apparatus of claim 11, wherein the threshold specified in said resource usage policy is a rate of active resource consumption.



IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Francisco J. Romero, et al.

Confirmation No.: 4633

Application No.: 09/709,705

Examiner: Luu, Le Hein

Filing Date: 11-09-2000

Group Art Unit: 2141

Title: APPARATUS AND METHOD TO AUTOMATICALLY ACTIVATE A RESERVE RESOURCE

Mail Stop Appeal Brief-Patents  
Commissioner For Patents  
PO Box 1450  
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Sir:

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on 07-19-2005.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$500.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

( ) (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d) for the total number of months checked below:

- |                  |           |
|------------------|-----------|
| ( ) one month    | \$120.00  |
| ( ) two months   | \$450.00  |
| ( ) three months | \$1020.00 |
| ( ) four months  | \$1590.00 |

( ) The extension fee has already been filled in this application.

(X) (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account **08-2025** the sum of \$500.00. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

(X) I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450. Date of Deposit: 09-19-2005  
OR

( ) I hereby certify that this paper is being transmitted to the Patent and Trademark Office facsimile number \_\_\_\_\_ on \_\_\_\_\_

Number of pages:

Typed Name: Gregory W. Osterloth

Signature: \_\_\_\_\_

Respectfully submitted,

**Francisco J. Romero, et al.**

By \_\_\_\_\_

**Gregory W. Osterloth**

Attorney/Agent for Applicant(s)

Reg. No. **36,232**

Date: **09-19-2005**

Telephone No.: **(303) 291-3200**